

12124

Horticulture Series No. 583

January 1988

O. A. R. D. C.

SEP 21 1988

LIBRARY

63-oarde

2999
C690
P180

1987

PICKLING CUCUMBER CULTIVAR EVALUATION TRIALS

Dale W. Kretchman, Mark A. Jameson and Charles C. Willer

Department of Horticulture
The Ohio State University
Ohio Agricultural Research & Development Center
Wooster, OH 44691

39
43

This page intentionally blank.

PICKLING CUCUMBER CULTIVAR EVALUATION TRIALS - 1987

The pickling cucumber cultivar evaluation trials were conducted at the OARDC Vegetable Crops Branch near Fremont. Seven cultivars or lines were evaluated in the replicated trial and six cultivars or lines were evaluated in the non-replicated observational trial.

Cultural Information

The soil is classed as a sandy loam. A broadcast application of 10-20-20 at 500 lbs/A was made and incorporated prior to planting. The plants were seeded on June 16 using a Stan-Hay seeder which seeds 4 to 5 seeds per ft. of row. Plants were thinned at the first true leaf stage to 2 single plants per foot of row. Rows were 30 ft. long on 30-in. centers. Alanap at 4 lb/A, Prefar at 6 lb/A were incorporated before planting. One active hive of honeybees was placed in the plot area when the plants started to bloom. All other cultural practices during the growing season were according to standard recommendations. Weed control was excellent and no serious insect problem developed during the season. Plants were side-dressed on July 7 with 50 lb/A of N.

The plots were harvested by hand and the cucumbers were graded and sized using a commercial sizer. Fruits were classed into the following sizes and values placed on each size according to the following values:

Size	\$ / Ton*	
	PCIC	OHIO
1. Less than 1 1/6 in.	120	300
2. 1 1/6 to 1 1/2 in.	60	170
3. 1 1/2 to 2 in.	40	90
4. 2 to 2 1/4 in.	20	20

Harvest started on July 24 and continued through August 11.

Growing conditions were generally good throughout the season with normal temperatures, with above normal rainfall in July. Rainfall from planting on June 16 to the end of June was 2.31 in; July rainfall was 4.87 in; rainfall to August 11 was 0.66 in.

Seed companies and others who provided the seed for the trials included: Harris-Moran Seed Co., Mountain View, CA; Northrup, King & Co., Gilroy, CA; Petoseed Co., Inc., Saticoy, CA; Sunseeds, Hollister, CA; and Musser Seed Co., Inc., Twin Falls, ID.

*PCIC values established by the Pickling Cucumber Improvement Committee of Pickle Packers International. Ohio values based upon estimated average prices paid in 1984-85.

All publications of the Ohio Agricultural Research and Development Center are available to all on nondiscriminatory basis without regard to race, color, national origin, sex, or religious affiliation. H-470/1-88/200

TABLE 1. First harvest yield from replicated trial of Pickling Cucumber Cultivars, 1987.

Line	Source	Lot No.	Size	Tons/A				Total	Culls
				1	2	3	4		
Hybrid Royal	Harris-Moran	77614-33348		.43	.31	.09	.04	.87	.09
HXP-4490	Harris-Moran	574		.36	.55	.10	.00	1.01	.22
HXP-2464	Harris-Moran	529		.40	.22	.17	.00	.79	.12
PSX-51184	Petoseed	461-1000-991		.28	.28	.24	.00	.80	.17
Aurora	Sunseeds	23200-R8962		.62	.44	.13	.04	1.23	.14
Sunre-797	Sunseeds	857756		.57	.35	.05	.00	.97	.13
Carolina	Petoseed			<u>.67</u>	<u>.31</u>	<u>.09</u>	<u>.00</u>	<u>1.07</u>	<u>.16</u>
		LSD 5%		.23	--	--	--	--	--

TABLE 2. Yield from replicated trial of Pickling Cucumber Cultivars, 1987.

Line	Yield from 6 Harvest Dates - Tons/A						Total	L/D Ratio		Seed Cavity Size*
	7/24	7/28	7/31	8/4	8/7	8/11		7/31 Size 2	8/11 Size 2	
Hybrid Royal	.87	2.39	2.10	3.97	.54	4.53	14.40	2.91	2.89	=
HXP-4490	1.01	2.74	1.58	3.11	.48	2.52	11.44	3.66	3.62	=
HXP-2464	.79	3.19	1.88	3.33	.63	3.24	13.06	3.00	3.03	+
PSX-51184	.80	2.25	1.77	4.33	.65	4.03	13.83	2.95	2.91	=
Aurora	1.23	3.02	1.89	3.20	.62	3.24	13.20	3.16	3.05	=
Sunre-797	.97	2.88	1.99	4.03	.65	3.88	14.40	3.22	3.28	+
Carolina	<u>1.07</u>	<u>2.45</u>	<u>2.21</u>	<u>3.52</u>	<u>.62</u>	<u>3.48</u>	<u>13.35</u>	<u>2.97</u>	<u>3.17</u>	=
LSD .05	---	----	----	.59	----	.63	1.6	0.17	0.22	

* Seed cavity size compared to Carolina: "=" Same size; "+" larger, and "-" smaller.

TABLE 3. Values of harvested cucumbers from Replicated Trial based on PCIC values, 1987.

Line	PCIC Value of 6 Harvest Dates- \$/A						Total
	7/24	7/28	7/31	8/4	8/7	8/11	
Hybrid Royal	75	156	160	202	47	251	891
HXP-4490	80	182	145	168	37	143	755
HXP-2464	68	196	154	164	46	172	800
PSX-51184	60	145	143	212	43	219	822
Aurora	107	200	145	156	38	169	815
Sunre-797	91	184	162	207	55	209	908
Carolina	<u>102</u>	<u>168</u>	<u>166</u>	<u>183</u>	<u>45</u>	<u>193</u>	<u>857</u>
LSD 5%			44				103

TABLE 4. Values of harvested cucumbers from Replicated Trials based on estimated Ohio values, 1987.

Line	Ohio Value of 6 Harvest Dates - \$/A						Total
	7/24	7/28	7/31	8/4	8/7	8/11	
Hybrid Royal	192	398	417	506	118	651	2282
HXP-4490	211	472	376	431	94	370	1954
HXP-2464	173	505	397	409	117	434	2035
PSX-51184	155	369	372	526	104	564	2090
Aurora	274	521	377	386	92	423	2073
Sunre-797	234	476	420	520	140	534	2324
Carolina	<u>261</u>	<u>439</u>	<u>428</u>	<u>454</u>	<u>114</u>	<u>504</u>	<u>2200</u>
LSD 5%			113				269

TABLE 5. First harvest yield from Observational Trial of Pickling Cucumber Cultivars, 1987.

Line	Source	Lot No.	Tons/A				Total	Culls
			Size	1	2	3	4	
HXP-3476	Harris-Moran	6133	.64	1.07	1.31	.00	3.02	.52
HXP-4488	Harris-Moran	554	.41	.32	.17	.00	.90	.14
Express F1	Musser Seeds	647-06-401	.29	.03	.00	.00	.32	.09
NVH-1912	Northrup King	38037-05900	.26	.06	.00	.00	.32	.06
Sunre-1284	Sunseeds	869664	.09	.12	.20	.00	.41	.06
Sunre-1208	Sunseeds	869665	.32	.12	.00	.00	.44	.03

TABLE 6. Yield for Observational Trial of Pickling Cucumber Cultivars, 1987.

Line	Yield from 6 Harvest Dates - Tons/A							L/D Ratio		Seed Cavity Size*
	7/24	7/28	7/31	8/4	8/7	8/11	Total	7/31 Size 2	8/11 Size 2	
HXP-3476	3.02	2.41	2.44	2.41	.75	3.48	14.51	3.37	3.42	=
HXP-4488	.90	4.18	2.21	3.69	.52	2.41	13.91	3.23	3.32	=
Express F1	.32	2.29	1.42	3.28	.26	2.73	10.30	3.36	3.58	=
NVH-1912	.32	3.16	2.00	3.48	.84	2.76	12.56	3.19	3.64	=
Sunre-1284	.41	1.45	2.35	3.60	1.42	4.27	13.50	3.00	2.89	=
Sunre-1208	.44	3.89	2.00	4.21	.87	2.82	14.23	3.11	3.31	=

* Seed cavity size compared to Carolina. "=" same size; "+" larger; "-" smaller.

TABLE 7. Values of harvested cucumbers from Observational Trial based on PCIC values, 1987.

Line	PCIC Value From 6 Harvest Dates \$/A						Total
	7/24	7/28	7/31	8/4	8/7	8/11	
HXP-3476	193	212	194	151	43	199	992
HXP-4488	75	250	183	183	32	153	876
Express F1	36	143	107	157	19	156	618
NVH-1912	35	185	156	176	44	160	756
Sunre-1284	25	120	153	188	68	245	799
Sunre-1208	45	214	153	210	43	173	838

TABLE 8. Values of harvested cucumbers from Observational Trials based on estimated Ohio values, 1987.

Line	Ohio Value From 6 Harvest Dates \$/A						Total
	7/24	7/28	7/31	8/4	8/7	8/11	
HXP-3476	492	548	509	379	106	499	2533
HXP-4488	192	638	472	463	78	393	2236
Express F1	92	376	262	385	49	405	1569
NVH-1912	88	478	408	429	91	410	1904
Sunre-1284	64	318	394	473	156	630	2035
Sunre-1208	115	559	376	513	80	454	2097

TABLE 9. Descriptive observation of cucumber cultivars and lines.

Cultivar or Line	Description
Hybrid Royal	Medium dark green, white spine, stippled, blocky, blossom-end restriction, good shape.
HXP-4490	Medium dark green, white spine, stippled, blocky, warty, good uniformity.
HXP-2464	Light green, white spine, stippled, blocky, prominent warts, some end restriction and some in center of fruit, fair uniformity.
PSX-51184	Light green, white spine, warty, some blossom-end restriction, blocky, looks good.
Aurora	Medium dark green, white spine, stippled, warts, some blossom and end restriction, fair uniformity.
Sunre-797	Light green, white spine, stippled, blocky, warty, some blossom-end restriction.
Carolina	Medium dark green, white spine, stippled, warty, some blossom-end restriction, poor uniformity.
HXP-3476	Dark green, white spine, prominent warts, fairly blocky, very long fruit, good uniformity.
HXP-4488	Medium green, white spine, stippled, warty, blocky, very short, poor uniformity.
Express F1	Medium light green, white spine, stippled, warty, blocky, slight blossom-end restriction, promising.
NVH-1912	Dark green, white spine, stippled, warty, blocky, slight blossom-end restriction, fair uniformity.
Sunre-1284	Dark green, white spine, warty, slightly stippled, slight restriction at both ends.
Sunre-1208	Light green, white spine, warty, some blossom-end restriction, fair uniformity.

This page intentionally blank.

This page intentionally blank.